ABSTRACT OF THE DISCLOSURE

A magnetic random access memory includes a memory cell array in which memory cells, each having a magnetoresistive element as a storage element, are arranged, word lines respectively connected to rows of the memory cell array, bit lines respectively connected to columns of the memory cell array, row decoders to select the word lines, and a column decoder to select the bit lines. To determine the value of storage data, electrical characteristic values based on storage data stored in the plurality of memory cells are detected, reference data is continuously written in the plurality of memory cells, the reference data written in the plurality of memory cells is continuously read out to detect electrical characteristic values based on the reference data, and the electrical characteristic values based on the storage data are compared with those based on the reference data.